

Comparisons of Job Characteristics

Focus Occupation: **Civil Engineers (17-2051)**

Associated Occupation: **Engineers, All Other (17-2199)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 74

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Engineers, All Other (17-2199)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	20.1	24.5	>>	Current knowledge level is likely more than sufficient
Mathematics	9.2	17.1	20.0	>	Current knowledge level is likely sufficient
Design	5.2	16.5	23.4	>>	Current knowledge level is likely more than sufficient
Computers and Electronics	8.4	15.0	11.5	<<	Extensive education and/or training may be required
Physics	4.3	14.8	15.8	0	Current knowledge level may be sufficient
Mechanical	6.8	14.0	7.9	<<	Extensive education and/or training may be required
Production and Processing	6.0	12.9	5.9	<<	Extensive education and/or training may be required
Building and Construction	4.0	6.6	21.6	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Engineers, All Other (17-2199)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	6.2	12.8	15.7	>	Skill level is likely sufficient
Systems Analysis	6.5	11.7	11.7	0	Current skill level may be sufficient
Science	4.5	11.4	11.9	0	Current skill level may be sufficient
Systems Evaluation	6.4	11.1	11.7	0	Current skill level may be sufficient

Operations Analysis	5.0	10.8	14.6	>>	Skill level is likely more than sufficient
Technology Design	2.6	7.9	5.0	<<	Extensive development of skills in this area may be required
Equipment Selection	3.3	6.3	2.4	<<	Extensive development of skills in this area may be required
Programming	2.2	5.3	5.2	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 97

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Engineers, All Other (17-2199)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Written Comprehension	11.0	15.1	14.9	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.0	15.2	0	Current ability level may be sufficient
Inductive Reasoning	10.2	13.7	14.4	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	13.4	14.9	>	Current ability level is likely sufficient
Information Ordering	9.9	13.2	13.8	0	Current ability level may be sufficient
Category Flexibility	9.0	12.3	13.4	0	Current ability level may be sufficient
Originality	7.6	11.8	12.0	0	Current ability level may be sufficient
Visualization	7.5	11.7	14.1	>	Current ability level is likely sufficient
Number Facility	6.3	11.6	13.9	>	Current ability level is likely sufficient
Fluency of Ideas	7.6	11.4	11.5	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 80

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Engineers, All Other (17-2199)

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Business function specific software	1
Cameras	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4

Duplicating machines	6
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Length and thickness and distance measuring instruments	2
Meteorological instruments	16
Network applications software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.